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The Home
FRUIT GARDEN
*in the Northeastern
and North Central
States*

LEAFLET
No. 227



U. S. DEPARTMENT OF AGRICULTURE

THE HOME FRUIT GARDEN IN THE NORTHEASTERN AND NORTH CENTRAL STATES ¹

The National Nutrition Conference, held in Washington, D. C., in November 1941, urged Americans to eat more fruit.

Well-ripened, sound fruits increase the healthfulness, variety, attractiveness, and palatability of meals. Despite the relatively large available supplies of fruit, many families, especially on farms, do not have adequate quantities in the diet. In almost every part of this country a number of fruits that usually require little or no spraying can be grown in farm or suburban fruit gardens. Fruits that need spraying are not so well suited for home production, but some edible fruit that would not meet commercial grades will be obtained. By properly selecting the kinds and varieties for home planting, a succession of fresh fruit of high dessert quality can be available during much of the summer season, and surpluses may be canned, preserved, dried, or in some cases frozen, for use during other seasons. Such consumption of home-grown fruits, together with purchases of kinds that cannot be grown successfully, should improve the diet and general health.

This leaflet lists the best kinds and varieties of fruits for home planting in the Northeastern and North Central States and gives brief directions for their care. Detailed information on these and other varieties that may be suitable for this region can be obtained from the State agricultural extension services or agricultural colleges.

Climatic Districts for Fruits

Summer and winter temperatures, rainfall, and prevalence of diseases and insects are important in determining the varieties that can be grown in the different parts of the country. Although many fruits are not hardy in parts of this region, some kinds can be grown in almost every home garden. In figure 1 the region is divided into districts based chiefly on the length of the growing season. Usually the same fruit and nut varieties can be grown throughout a district.

Kinds and Varieties to Plant

Under most conditions in this region the best fruits for the home garden are, in order of adaptability where spraying is not practiced, (1) strawberries, (2) raspberries, (3) sour cherries, (4) grapes, (5) plums, (6) pears, (7) sweet cherries, (8) blackberries, and (9) apples. Under some conditions peaches, cherry-plum hybrids, and blueberries may be grown. Currants and gooseberries, which succeed well in all parts

¹ Prepared by the staff of the Division of Fruit and Vegetable Crops and Diseases, Bureau of Plant Industry, with the collaboration of horticulturists of the States in the region. The varieties suggested herein are those recommended by these horticulturists.

of the region, should be planted wherever quarantine regulations permit, that is, where white pines are not important. In certain locations black walnuts, Chinese chestnuts, hickories, and filberts may well be included. Sour cherries succeed in all but the coldest part of the region.

Fruit trees and grapes in all districts are benefited by proper spraying, and in the vicinity of commercial orchards and vineyards fruits in the home garden should be sprayed to prevent the spread of insects and diseases.

Strawberries are adapted to the greatest number of locations and conditions in this region. They are the first fruit to ripen, are of fine flavor, and are the highest in vitamin C content of any fruits that can be grown in this region. Even when frozen, strawberries keep their vitamin C content for many months. Strawberries should be a part

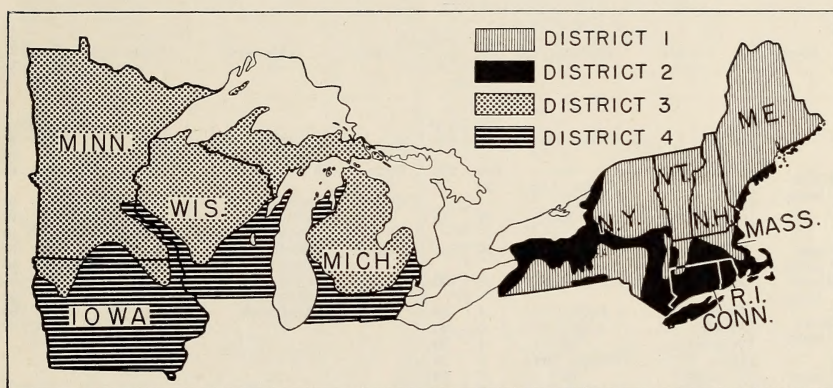


FIGURE 1.—Map of the Northeastern and North Central States. District 1—growing season of 90 to 150 days; moderate summer temperatures; winter temperatures low. District 2—growing season of 150 to 180 days; fairly high summer temperatures. District 3—growing season of 90 to 150 days; severe winters. District 4—growing season of 150 to 180 days; fairly high summer temperatures, similar to district 2.

of almost every garden. The everbearing strawberries Rockhill, Green Mountain, and Gem can be grown in all districts of this region.

Red and purple raspberries can be grown in all districts of this region, and black raspberries except in northern Minnesota. Usually it is best not to grow both red and black varieties in the same garden, for cultivated and wild red raspberries often have a virus disease that spreads to black raspberries and quickly kills them. Either of the red raspberries Taylor or Latham (not both) should be grown in district 1. Red raspberries are relatively high in vitamin C.

Strawberries, raspberries, plums, and grapes cover the season from June until frost. More than one variety of some fruits may be grown to extend the season. Thus, Howard 17 (Premier), Catskill, and Gem will furnish strawberries for most of the summer.

In districts 2 and 4 and in the southern parts of districts 1 and 3, more nuts, which are high in food value, may well be planted. The newer named varieties are better than wild seedlings. Good varieties of black walnuts are the Thomas and Ohio, of filberts the Bixby and Buchanan, and of Chinese chestnuts the Carr and Hobson. The plant-

ing distances are 40 feet apart for black walnuts, 30 feet for chestnuts, and 15 feet for filberts. Filberts can be grown wherever peaches are hardy. The black walnut may be used as a shade tree, especially in the milder parts of the region.

The varieties recommended for medium-sized gardens in the different districts are listed in table 1. Some of the varieties suggested are different from those grown in commercial plantings. Two or more varieties of sweet cherries, some plums, pears, apples, blueberries, filberts, and Chinese chestnuts must be planted for cross-pollination and adequate fruit set.

TABLE 1.—*Varities suggested for medium-sized gardens in representative parts of the districts of figure 1*

DISTRICT 1 (NORTHERN NEW ENGLAND AND MUCH OF EASTERN AND SOUTHERN NEW YORK)

Fruit ¹	Variety	Month ripe	Plants	Length of row	Fruit ¹	Variety	Month ripe	Plants	Length of row
Straw- berry.	Howard 17 (Premier).	June-July	No. 100	Feet 200	Plum	Stanley	Sept.	No. 4	Feet 60
	Catskill	do.	100	200		Shropshire	Sept.-Oct.	4	60
	Gem	June; Aug.-Oct.	50	75		Montmorency	July	2	40
	Green Mountain.	do.	50	75	Sweet cherry. ²	Schmidt	do.	2	40
Rasp- berry.	Taylor (red) or Latham (red).	July	50	125		Windsor	do.	2	40
Black- berry. ²	Eldorado	July-Aug.	25	100	Pear ²	Clapp Favorite	Aug.-Sept.	2	40
Blue- berry. ²	Pioneer	July	4	20	Apple	Bartlett	Sept.	2	40
	Stanley	Aug.	4	20		Bosc	do.	2	40
	Wareham	do.	4	20		Lodi	Aug.	2	60
Grape ²	Beta	Sept.-Oct.	3	24		Milton	Sept.	2	60
	Worden	do.	3	24		McIntosh	Oct.	2	60
	Fredonia	do.	3	24					

DISTRICT 2 (SOUTHERN NEW ENGLAND AND RIVER VALLEY AND LAKE PARTS OF NEW YORK)

Straw- berry.	Howard 17 (Premier).	June	100	200	Peach ²	Mikado	Aug.	2	40
	Catskill or Fairfax.	do.	100	200		Golden Jubilee	Aug.-Sept.	2	40
	Gem	June; Aug.-Oct.	100	150		Halehaven	Sept.	2	40
						Elberta	do.	2	40
Rasp- berry.	Taylor (red)	July	50	125	Sour cherry.	Montmorency	June-July	2	40
Black- berry.	Bristol (black)	do.	25	100	Sweet cherry.	Black Tartarian.	do.	2	40
Blue- berry.	Sodus (purple)	do.	25	100		Windsor	do.	2	40
	Eldorado	July-Aug.	25	100	Pear	Bartlett or Gorcham.	Sept.	2	40
	Pioneer	July	4	20		Seckel	do.	2	40
Grape	Stanley	Aug.	4	20	Apple	Bosc	Sept.-Oct.	2	40
	Wareham	do.	4	20		Lodi	Aug.	1	30
	Fredonia	Aug.-Sept.	3	24		Milton	Sept.	2	60
Plum	Worden	Sept.	3	24		McIntosh	Sept.-Oct.	2	60
	Concord	do.	3	24		Northern Spy	Oct.	2	60
	Niagara	do.	3	24		Golden Delicious.	do.	2	60
	Beauty	July	2	30					
	Abundance	Aug.-Sept.	2	30					
	Stanley	Sept.	2	30					
	Shropshire	do.	2	30					

See footnotes at end of table.

TABLE 1.—*Varieties suggested for medium-sized gardens in representative parts of the districts of figure 1—Continued*

DISTRICT 3 (NORTHERN AND CENTRAL MICHIGAN, NORTHERN AND CENTRAL WISCONSIN, MOST OF MINNESOTA, AND PARTS OF NORTHERN IOWA)

Fruit ¹	Variety	Month ripe	Plants	Length of row	Fruit ¹	Variety	Month ripe	Plants	Length of row
			No.	Feet				No.	Feet
Straw- berry.	{ Howard 17 (Premier).	June-July	100	200	Cherry- plum hybrid.	{ Compass	Aug.	2	20
	{ Beaver	do	100	200		{ Opat	Aug.-Sept.	2	20
	{ Gem	June; Aug.-Sept.	50	75		{ Sapa	do	2	20
Rasp- berry.	{ Chief (red)	July	50	125	Pear	{ Lincoln	Sept.	2	40
	{ Latham (red)	do	50	125		{ Parker	do	2	40
	{ Red Lake	do	10	40		{ Mendel	Sept.-Oct.	2	40
Currant ³	{ Como	do	5	20	Apple	{ Yellow Trans- parent.	Aug.	1	30
Goose- berry. ³	{ Poorman	do	5	20		{ Wealthy	Aug.-Sept.	1	30
	{ Beta	Sept.	5	24		{ McIntosh	Oct.	2	60
Grape	{ Underwood	do	5	60		{ Haralson	do	2	120
	{ Monitor	do	5	60		{ H a w k e y e	do	2	60
Plum	{ Surprise	do	1	20		{ Greening.	Sept.	2	40
					Crab apple.	{ Dolgo	Sept.	2	40

DISTRICT 4 (SOUTHERN MICHIGAN AND WISCONSIN, PARTS OF SOUTHERN AND SOUTHEASTERN MINNESOTA, AND MOST OF IOWA)

Straw- berry.	{ Howard 17 (Premier).	June	100	200	Plum	{ Underwood	Aug.-Sept.	3	60
	{ Beaver	do	100	200		{ Ember	Sept.	3	60
	{ Gem	June; July-Oct.	100	150	Cherry- plum hybrid.	{ Compass	Aug.	2	20
Rasp- berry.	{ Chief (red)	June-July	50	125		{ Opat	do	2	20
	{ Latham (red)	July	50	125		{ Sapa	do	2	20
Currant ³	{ Red Lake	June-July	10	40	Sour cherry.	{ Montmorency	July	2	40
	{ Como	do	5	20		{ Lincoln	Sept.	2	40
	{ Poorman	July	5	20	Pear	{ Seckel	do	2	40
Goose- berry. ³	{ Portland	Aug.-Sept.	3	24		{ Parker	do	2	40
	{ Worden	do	3	24		{ Winter Nelis	Sept.-Oct.	2	40
Grape ⁴	{ Niagara	Sept.	3	24	Apple	{ Melba	Aug.	2	60
	{ Concord	do	3	24		{ Wealthy	Sept.	2	60
	{ Pioneer	July	4	20		{ McIntosh	Sept.-Oct.	2	60
Blue- berry. ³	{ Stanley	Aug.	4	20		{ Haralson	do	2	60
	{ Eldorado	do	25	100		{ Jonathan	do	2	60
Black- berry. ⁵						{ H a w k e y e	do	2	60
					Crab apple.	{ Greening.	Aug.-Sept.	2	40
						{ Dolgo	Aug.-Sept.	2	40

¹ Two or more varieties of blueberries, apples, some plums (e. g., Beauty and Abundance), sweet cherries, and pears are necessary to insure cross-pollination and fruit set. Seckel and Bartlett pears will not pollinate each other.

² In favorable locations only.

³ Grow only where white pines are not important.

⁴ Winter protection advisable in exposed location.

⁵ Michigan only.

Planting and Care

SOURCES OF PLANTS.—Fruits adapted to this region are propagated by commercial nurserymen, who are generally dependable sources of fruit varieties. Names of nurseries can be supplied by the State agricultural extension services.

LOCATION OF PLANTING.—Although it is generally desirable to have the planting near the house and perhaps adjacent to the vegetable garden, this may not be the most favorable location. In general, the planting should not be in a low or frosty area but on moderately elevated land or on a north or northeastern slope that will provide satisfactory air drainage. Where a choice is possible, heavy soils should be selected for currants and gooseberries.

SIZE OF PLANTING.—The size of the planting will vary with the space available. In some locations there may be space for only a few grapevines on an arbor or fence, a few fruit trees around the buildings, or a row or two of berries by a fence. On other places the size of the planting is determined by the needs of the family and by the kinds of fruit that can be grown. Most small gardens (10 by 50 feet to 30 by 50 feet) should consist mostly of berries and grapes. A half-acre

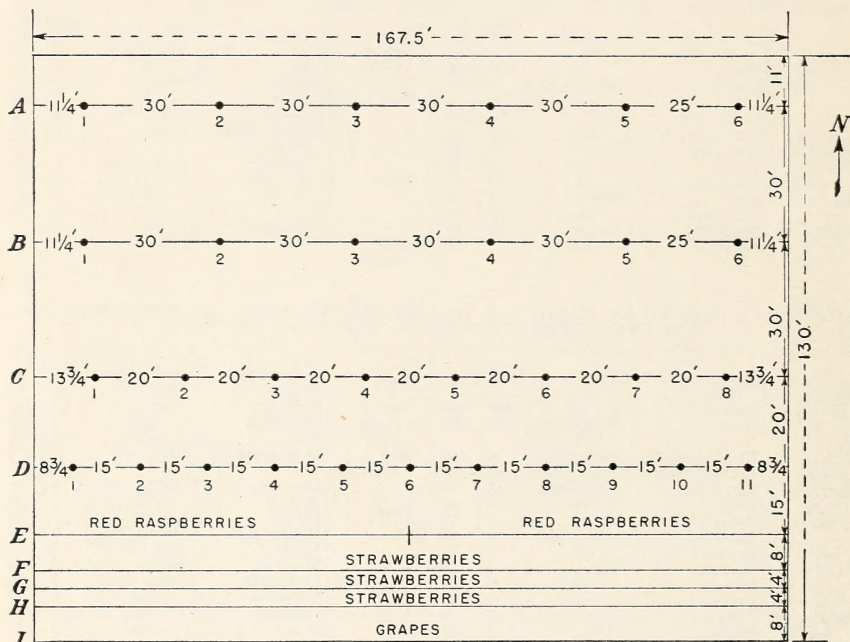


FIGURE 2.—Suggested arrangement for a half-acre fruit garden. Rows A and B—Nos. 1 to 5, apples; No. 6, sweet cherry. Row C—Nos. 1 to 5, pears; Nos. 6 to 8, sweet cherries. Row D—Nos. 1 to 9, plums; Nos. 10 and 11, sour cherries. Row E—red raspberries (2 varieties). Rows F to H—strawberries (3 varieties). Row I—grapes (trained on a wire trellis or on a fence used as a shading of the small fruits).

garden that will furnish fruit in season for a large family is illustrated in figure 2.

WHEN AND HOW TO PLANT.—Usually a better stand of plants will be obtained by setting them as early in the spring as it is possible to prepare the soil. The ground should be prepared as thoroughly as for a vegetable garden. It is important that the plants be entirely dormant, with no buds starting, at time of planting. Also, the roots should not be allowed to dry out. Berries and grapes should be set at the depth they grew in the nursery. Fruit and nut trees should be set slightly deeper. The roots should be spread out when the plants are set. When the holes are dug the topsoil and subsoil are separated. The topsoil is placed about the roots of the tree in the hole, and the subsoil is used last to fill up the rest of the hole. The soil should be

thoroughly firmed about the roots to prevent drying out and to help hold the tree in position.

PRUNING BEFORE PLANTING.—Before strawberries are planted all fully developed leaves should be picked off. The canes of raspberries, blackberries, currants, and gooseberries should be cut back to about 6 inches at time of planting. Grapevines are usually cut back, leaving only one or two buds. If fruit trees obtained from the nursery are unbranched whips, 4 to 7 feet tall, they should be headed back to a height of 35 to 40 inches. If they have several good-sized branches well spaced along the trunk, three or four may be left. The branches should be spaced about a foot apart along the trunk and should point in different directions.

CULTIVATION.—The cultivation of the home fruit garden is similar to that of the vegetable garden. Cultivation should begin as soon as the ground is dry enough and should cease about July 15. Under most conditions the same methods of maintaining the fertility of the soil that are followed in a vegetable garden are successful with fruit. Where stable manure is available, its liberal use generally gives excellent results. In this region strawberries do not often require fertilizer on any soil that will raise good vegetables. Strawberries should be mulched with straw to protect them from winter injury. This should be done in the fall after killing frosts but before it is cold enough to freeze the ground. Straw 3 inches deep after settling in most areas and 6 inches deep in districts with severe winters, such as Minnesota, Wisconsin, and northern Iowa, furnishes the needed protection against cold.

All berry plants should be cultivated as cleanly as vegetables. Fruit trees and grapevines should be given clean cultivation for the first 3 or 4 years. Thereafter apples, pears, plums, cherries, and nut trees may be kept in sod.

PRUNING AFTER THE FIRST YEAR.—To many inexperienced growers the question of how to prune trees and bushes appears to be very complicated. If certain basic principles are kept in mind, however, it is possible for even the inexperienced grower to do a satisfactory job of pruning. The purpose of pruning is to develop the tree or bush so that it will have maximum strength to carry a load of fruit and maximum bearing capacity. A safe rule in pruning trees, particularly young trees up to bearing age, is to prune them as little as will accomplish this specific purpose. Cross branches and suckers should be removed and broken or dying limbs cut out. Young trees of most fruits require little pruning before they come into bearing. Pruning of fruit trees in general should be done during the dormant season, preferably in the spring after danger of severe winter freezing is past but before growth has started.

If the growth of grapevines is rather weak during the first season, it is advisable to cut the vine back at the end of the first growing season to one or two buds and to train up a strong trunk during the second growing season. If the vine is to be trained to a fence or a two-wire system, it should be tied to a stake and carried upright until it reaches the top wire. At that point it should be pinched off and two laterals led out, one in each direction, along the wire. During the second season lateral canes will grow from all the buds along the trunk. Two of these at the height of the first wire above the ground should be selected and tied to that wire to develop fruiting wood. The other

branches along the trunk should be rubbed off or pinched back during the growing season.

In most cases the vines, if properly cared for, will begin to bear fruit the third year after planting and should continue to produce a satisfactory crop for many years thereafter.

Pruning should be done while the vines are in a dormant condition. It is important to note that fruit is borne on shoots from the canes of the previous year's growth. In pruning, therefore, enough new wood should be saved to provide for the next summer's crop, and the rest removed. With healthy, vigorous vines, 50 to 60 buds will produce as much fruit as the vine can mature properly. More wood may be left on vines for home production, provided sufficient space is available for the vine to develop. With vigorous vines, the leaving of more wood may result in a greater total quantity of fruit, but the individual bunches may be inferior in size and the fruit of poorer quality.

The pruning of raspberries and blackberries consists in removing the old fruiting wood each season. These old canes should be cut off close to the ground after the fruit has been picked, and the new canes will then develop strong growth to produce fruit for the following season. The tips of new shoots of black raspberries are pinched off at a height of 12 to 18 inches, and those of purple raspberries and blackberries at 18 to 24 inches. Red raspberries are not cut back, but the weak canes should be removed. Winter pruning of black and purple raspberries and of blackberries consists in cutting back lateral branches to about 12 inches.

SPRAYING.—For those who find it possible to spray in order to produce the best quality of tree fruits and grapes, the State agricultural colleges can furnish spray programs giving details of sprays and times of application.

Using the Crop

It is just as important to save and use the fruit produced as to produce it. The expert housewife becomes acquainted with the best uses of the different kinds and varieties of fruit. When there is an abundant supply of any fruits, more will be used in the diet. Surpluses should be canned, preserved, or frozen. In periods when fruit is not available from the home garden, supplemental fruit should be purchased.